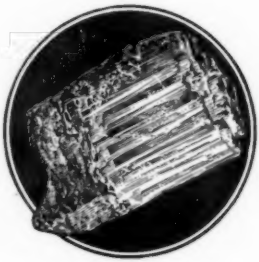
ASBESTOS

Vol. 3 JANUARY, 1922 No. 7



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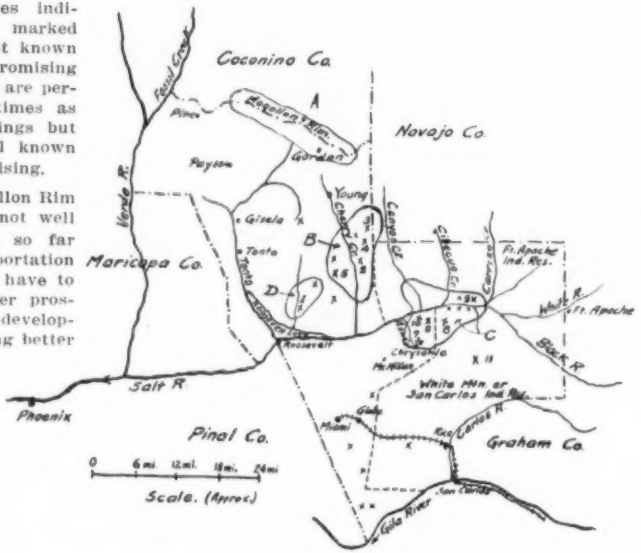
MAP OF GILA COUNTY, ARIZONA

Supplied Thru the Courtesy of Carl Trischka, Chrysotile, Ariz.

The places indicated and marked are the best known and most promising ones. There are perhaps five times as many showings but not so well known or so promising.

The Magallon Rim District is not well known and so far from transportation that it will have to await further prospecting and development pending better roads.



1 - Sierra Ancha or American Ores & Asbestos, Raybestos Mine.
2 - Flying H Ranch
3 - Kyle & Pierce
4 - Jess Whitley
5 - Carrie Rogers
6 - Geo. England, Bob Anderson, Mac Robinson } Best showing on Reservation
7 - Ariz Asbestos Association.
8 - Geo. Shanley (Canadian ground
9 - Geo. Shanley Pennington
10 - Regal Mine (Salt Banks)
11 - Bear Canyon (Col. Thayer)

A - Magallon Rim District. Possibilities but inaccessible.
B - Cherry Creek District
C - Chrysotile & Indian Res. District.

D - Sierra Ancha District.

x - Prospects

Asbestos Selvage Edge Tape

ITS MANUFACTURE AND GENERAL USES

By Roy A. Smith.

To the uninitiated, the thought of weaving a tape from a mineral seems absurd but this seemingly impossible feat is performed daily with some of the various types of minerals of the Asbestos group.

The most widely used type of Asbestos—Chrysotile—is a hydrous silicate of magnesia and is found in the Province of Quebec, Canada, in the belt that centers at Thetford Mines, where the majority of the world's supply is mined. There are, however, other sources of supply now being opened up—in Rhodesia, in China, New Zealand, Australia and Russia. The Canadian grades are used practically exclusively in our domestic market and this article will deal almost entirely with the usage of Chrysotile from the Canadian mines.

In the manufacture of various types of Asbestos Tapes different gradings of crude materials may be used. Where a fine tape is to be run it is necessary to use a long staple Asbestos, as it is essential that we secure good tensile strength with the required thickness. As the range in thickness goes higher, we may use a No. 2 Crude and for the manufacture of heavy tapes, such as Brake Lining, even use the so-called spinning fibres.

Foreign manufacturers seem to secure better results from the use of spinning fibres than do we on this side of the water. Their machinery is run at a much slower rate, giving them less resultant waste, and they are satisfied with a lower producing capacity per machine than are we over here. The American idea is to secure the greatest output possible, thereby lowering production costs and insuring prompt delivery to customers, regardless of a small percentage of wastage such as would appeal our European brothers. We Americans feel that we are justified in this loss from the premier grades because uses have been devised for the utilization of this waste, and the increase in machine production will offset the slight difference in costs.

Details of Manufacture

Chasing or Crushing

Crude Asbestos after having been shipped from the mines is chased or crushed to break it down, separate any rock mass that might have adhered to the fibrous mineral, and enable the manufacturer to regrade his stock either manually or mechanically. The crushing of crudes for the manufacture of fine tapes is an art, and a question that apparently does not interest some of the manufacturers. Too much time cannot be spent on this phase of tape manufacture and at present too little is. It is absolutely necessary that the material has its full "life" in order to secure maximum value thruout the various operations.

Mixing

After having been crushed and regraded, the fibres are mixed with various percentages of cotton, (the percentage depending on the class of finished stock desired) on a picker. This cotton is added to the Asbestos during the manufacturing process, and the length and quality will vary according to thickness and uses of finished stock. For very fine tape we use a high class long staple cotton (Sea Island), it being necessary to add only a small percentage of this high quality to function properly. As the grades of Asbestos used become shorter, it is, of course, imperative that a larger percentage of cotton be used in the mix, in order that the mass will have sufficient body to card. Very few of the manufacturers wish to cheapen their product, and under ordinary circumstances adopt a fifteen per cent cotton mix, as standard. For electrical work it is advisable that tape does not contain over four and one-half per cent carbon, combustion test.

Carding

The mixed material is now ready for carding. The machines used for this work are the same type as those used in the carding of wool and cotton, with a slight change in card clothing. The processes are almost identical with those employed in the general textile industry, sloven being taken off on either a spool for mule spinning or small bobbins for frame spinning.

Spinning

Sloven, or finished carded stock is carried from the cards to mules or spinning frames for spinning purposes.

The mules are able to give a great production daily but will not handle a fine stock as well as the spinning frames. The whipping action of the mules has a tendency to break the strands of Asbestos and will not give a tight enough twist to the yarn to secure maximum strength. The yarn during the spinning process is wound on small cones or spools and is then ready for twisting.

Twisting

Single strands of spun yarn are taken from the spinners and racked on a twisting frame. This frame is used to twist two or more strands of yarn together according to the purpose to which the finished stock will be put. In the case of brake lining, brass or copper wire strands are intertwisted with the Asbestos to give strength and body.

Warping

After having been twisted into the proper number of plies, the yarn is routed to the warpers. These warpers are large frames built to hold numerous spools and are filled with the material then entering the schedule of production. In making a warp, each strand is called a "pick" and the number of ends vary depending upon the type of material desired, and the width in which the tape is to be made. These ends are carried thru to a large spool and wound on it to the desired length. The material is then warped or beamed, and is ready for the looms.

Weaving

Of all the phases in the manufacture of Asbestos Selvage edge tape, weaving is the hardest. For various sizes of tape we need certain size reeds. These reeds designate the number of picks per inch of warp in the finished tape. Care must be taken in their choice. The amount of tension put on beam is also a question of moment. Some looms have a greater "back drag" than others, and it is practically impossible to set a figure to strictly adhere to. When you consider that the elements of tensile strength of yarn entering into the warp, drag, weights, and above all, the general cussedness of Asbestos as a whole, feature in this semi-climax, you can readily understand that there can be no set principle of operation and that the big item of manufacture is the human element.

The actual operation is conducted on the same lines as the weaving of other textile fabrics, with perhaps a slight change in looms. The bobbins containing the woof are in-

serted in the shuttle, a lever pushed forward and the operation goes merrily on. The "genius" operating a tape loom has merely to watch ten or twelve pieces of tape, see that the warps have been properly beamed, that the tension on beam is uniform thruout, that the bobbins are properly adjusted, that no ends break, that the selvage does not "draw", and that there are no imperfections in the woven material. Considering all of the above do we wonder why there are so few manufacturers of fine Asbestos Tapes in this country?

Calendering and Inspection

The finished woven tape is cut from the looms and carried to the calenders and coilers. Inspection is again made at this point to insure the manufacturer that no imperfect material is being shipped.

The tape is wound on small "cops", the length of material per cop varying as to thickness and width. Several consumers have specifications covering the coiling of tape and these have to be strictly adhered to as their winding machinery will only accept coils of certain dimensions. This finished stock is now sent to the shipping department for final inspection and shipping.

Uses

Electrical Field

In this country the bulk of all fine tape is used in the manufacture of electrical apparatus. The material used, of course varies in thickness and width according to the duties it must perform. Stock sizes of tape for electrical work are widths of ½", ¾", 1", 1¼" and 1½", with thicknesses of .015", .020", .025", .035", a slight variation in thickness (a plus or minus of .002") being allowed.

If the tape were excessively thick all size requirements of the electrical apparatus manufacturers will be thrown off and for this reason the electrical manufacturers insist on having their specifications rigidly adhered to. At times the Asbestos manufacturer feels that the consumer is rabid on this point, but when you figure that other material entering into the manufacture of motors and generators is machined to exactness, you can readily see that it is absolutely essential that the tape meet with their specifications as to size.

Asbestos tape is used on electrical windings where a

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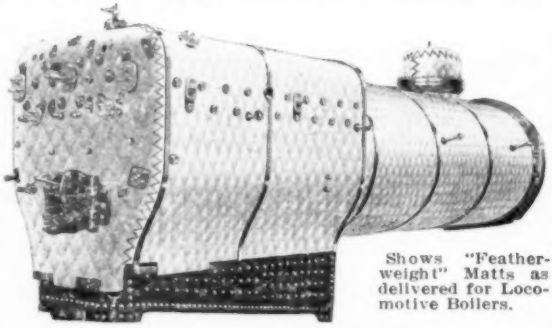

Shows "Featherweight" Matts as delivered for Locomotive Boilers.

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heat enduring insulation is required, and it is usually placed on the outside to act as a binder, to which purpose it lends itself better than cotton. Thousands of pounds are used daily by the various manufacturers of electrical apparatus and commerce owes much to the mineral Asbestos.

Following the lead of the United States, in having the first electrically driven ships, other nations are considering electrifying their present equipment. This will give a big impetus to the manufacture of Asbestos tape as a large export market will be opened, either in the shape of electrical apparatus by the apparatus manufacturers or the purchase of tape by foreigners.

The rush to Alberta, Canada, for "Liquid Gold" has also opened up a good field for electrical apparatus and, incidentally, repair parts.

The new "Lakes to the Sea" waterways will ultimately be established, with the possibility of developing the most stupendous power scheme in the world, all of which will react to the benefit of the Asbestos market.

Cotton treated tapes have an advantage over Asbestos in that they are moisture proof and for this reason are used where mechanical strength and insulation are necessary, for example armature and field coils as well as transformer and motor coils, low-voltage armature coils, etc. The Asbestos manufacturers might spend many a profitable hour in developing a tape with a higher mechanical strength, oilproof and moistureproof, at the same time keeping it flexible.

Mica shim and paper, or, in other words, a paper binder coated with shellac, and covered with thin sheets of mica built up in layers to the required thickness, is also used as an electrical non-conductor for windings. This material while hard to manufacture, will act as a resistant to heat under continued pressure. Asbestos tape will also function under these conditions and minimize the labor costs of installation.

Many of the electrical manufacturers and contractors have adopted Asbestos tape as a winding for buss bars, as owing to its ease of application, it is readily adaptable for this type of work.

Several of the large Public Utilities have used Asbestos tape, after exhaustive experimentation, in preference

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to other materials as an insulating material for underground cables. For this class of work it has the advantage of withstanding climatic conditions without deteriorating and will outlast other classes of impregnated insulating materials. Asbestos is not affected by heat or cold, shows no deleterious effect from dampness and is fire resisting. For these reasons it is the best material that could be used for the above purpose.

The following reasons show clearly why Asbestos tape is preferred to the majority of insulating tapes as used in the electrical field where heat is a question of moment:

Armature Coils, Irregular shapes and forms of coils, cores, etc.	Heat resisting Ease of application Superiority of service Longevity of service
Buss bars	Heat resisting Ease of application Superiority of service
Underground Cables	Heat resisting Ease of application Shows no ill effects from climatic conditions Does not age.

Asbestos tape is also used in another phase of the electrical field, viz: the manufacture of electric ovens. The tape is used as a door insulation, and also to cover small exposed connections and insulate the heating units. These ovens are capable of developing and holding high temperatures and for these reasons it is imperative that only heat resisting insulating materials be used.

Gasketing Material

Asbestos tape is used as a gasketing material in the manufacture of Hydro-chloric and Nitric acids; in fact many of the chemical processes demand the use of Asbestos gaskets as, owing to their being both heat and acid resisting they are particularly well adapted for this type of work.

Laboratory

Asbestos tape, owing to its ease of application to irregular shapes, has been a boon to the laboratory. It can readily be wrapped around a flask, test tube, retort or whatnot. It can be used as a tie strap while fusing ma-

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terials and has so many diversified uses that it is almost an impossibility to enumerate them.

Pipe Insulation

Many Europeans use Asbestos tape, in conjunction with Asbestos wick or rope, as a pipe insulation. The wick or rope is first wrapped around the pipe and the whole bound on with the tape. This class of covering has the advantage over moulded coverings in that it will withstand excessive vibrations, is more readily adapted to variable sizes of pipe in the same line and is easy to apply on bends. This type of insulation is used most extensively on submarines, stationary gas engine exhaust pipes, steam engines, motor boats, motor cars and during the war as exhaust pipe covers on both the light and heavy tanks. It has been introduced into this country and used to some extent. Since the United States produces more launches and motor cars than any other nation of the world there is an exceptionally wide field open here for insulation of this character.

Glass Manufacture

Asbestos Tape is used by glass manufacturers for wrapping the tines of forks which they use for taking bottles, etc. out of their ovens. The forks are wrapped with this material in order that there will be no metallic contact with the glass in process of manufacture. Should an unwrapped fork be used there would undoubtedly be an enormous loss in breakage from unloading, etc.

Asbestos tape is also used to reinforce the paddles used in stirring the molten glass, as owing to the severe heat other materials that could be used commercially would not be acceptable for this type of work.

They also use it to protect the glass on train lighting systems as the heat and vibrations are liable to chip the glass should the bowls be connected directly with metal as is common in house lighting systems. The tape is applied usually with sodium silicate and a fairly open mesh type will be satisfactory for this class of work. Some of the manufacturers also use Asbestos Tape as a "draw strap" or "pull string" for the pans in which they heat treat their products. This of course in cases where it is not advisable to have automatic conveying systems. In fact its wide range of uses has done much towards bringing the

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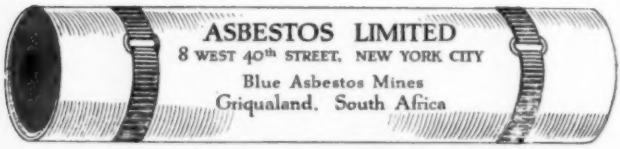

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manufacture of glass in this country to its present high standard.

Brake Lining

The manufacture of Asbestos wire woven tape for Brake Lining has developed in the past few years from a small experimental stage to one of the largest items of interest to the Asbestos manufacturers. The American mania for speed has done much to force the growth of the infant industry of a dozen years ago to a stupendous size in the present age. In the early days of the automotive industry metal brakes were used, but they were extremely noisy and had a tendency to "seize" when applied. Leather was then tried but it did not have the wearing qualities and also glazed, losing its frictional qualities. It was then learned that a material must be found which would withstand the heat developed when the brakes are applied, have good frictional qualities, absorb the energy without undue discomfort to passengers, yet quickly enough to avert danger. In 1906 the first Asbestos Brake Linings were produced. These linings were untreated and had a tendency to wear quickly. Further experimental work by Asbestos manufacturers, in co-operation with the automobile manufacturers, gradually developed the material now in almost universal use.

The speed and power of motor cars have increased, and it rests with the Asbestos manufacturer to further develop Brake Lining to meet changing conditions. When we consider that the United States manufactures 75% of the automobiles in the world and that traffic laws are constantly being changed to allow for greater speed, owing to heavy traffic, is it a wonder that many of the best minds are trying to solve the problem of the least known part of a car, namely the brakes. Thousands of children are killed annually by speed maniacs driving with faulty brakes. Some of the Asbestos manufacturers are responsible for many of these lives, as they are cheapening their product beyond a point of safety. The introduction of an excess of cotton into the mix will cause this cotton to readily burn out, leaving pedestrians to the mercy of a projectile on wheels. The motorist on a long hill trusts implicitly on his brakes and should he be using brake lining of poor quality, his brakes will burn out, leaving him just a wild car.

ASBESTOS

Were it not for Asbestos Brake Lining we could not travel as quickly or comfortably as we do, but even in our present deluded sense of security, we must give our attention to the betterment of linings. "Speed with safety" should be the motto of everyone and if it is impossible to speed and be on the safe side, better not speed.

Brake Lining, to be efficient, should be treated with a compound which will bind the fibres into a homogeneous mass, have good co-efficient of friction, be able to withstand the heat generated in the application of brakes, and above all, have enduring qualities. The demand for greater speed with safety will shortly be met by the installation of four wheel brakes, all of which will mean that the people of the United States will shortly be using twice the quantity of Brake Lining that they are using at present.

The Wire Market

The Standard Underground Cable Company in commenting on the wire market, says:

The copper market continues strong with prices ruling at 13⅞ for prompt delivery and most holders asking 14c. for the first quarter delivery. The statistical position is favorable to this level of prices and seems to leave no justification to expect lower figures unless there should be a general or considerable resumption of copper mining. Demand has slackened up somewhat compared with November and early December, but production continues correspondingly low.

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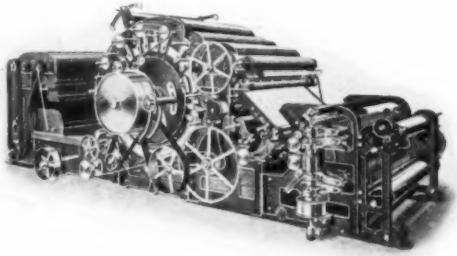

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The Hon. George R. Smith

The Hon. George R. Smith

For just about thirty years, the Hon. George R. Smith has been one of the particularly well-known figures in the Asbestos Industry.

Born in Newark, N. J., February 17th, 1860, Mr. Smith was educated at Rutgers College, New Brunswick, N. J., and upon graduating in 1882, he became connected with the wholesale jewelry business in the continent. It was thru his connection with the jewelry trade that he became acquainted with the Ingersoll-Rand Drill Company, which at that time was experimenting with black diamonds for use as drill points.

Mr. Smith supervised the cutting of the granite columns for the Chicago Post Office, which was the first large work of this character undertaken by this method.

Mr. Smith subsequently went to Canada as the representative of the Ingersoll-Rand Drill Company and in 1892 became Manager of the Bells Asbestos Company, Limited, of London, with mines at Thetford Mines, Quebec, now the Bell Asbestos Mines owned by the Keasbey & Mattison Company.

Fritz Cirkel, in his notable book on Chrysotile Asbestos and Its Occurrence, gives Mr. Smith credit for much engineering and mining initiative, particularly stating that Mr. Smith first applied in the Asbestos District the tunnelling system, which has since been adopted by several other producers.

In 1909 Mr. Smith removed to Montreal to manage the plant of the Asbestos Manufacturing Company, Limited, (controlled by the Keasbey & Mattison Company) located at Lachine, a few miles outside of the city; at the same time continuing his active management of the Bell Asbestos Mines. Shortly after the outbreak of the War, Mr. Smith returned again to Thetford where he still resides.

Mr. Smith has represented the County of Megantic in the Quebec Legislature for three successive terms, 1896 to 1904, and in January 1911 was called to the Legislative Council for Victoria.

In 1886 he married Isabella Frances Parker of Buckingham, Quebec. The family consists of five sons and two

daughters, one of the sons, Orlando, being Mr. Smith's assistant in charge of the Bell Asbestos Mines.

George R., as he is most frequently addressed and referred to, is a member of a number of Clubs and Technical Societies, finds his recreation chiefly in hunting and fishing, and thru the years has come to be well and favorably known not only in the Asbestos Industry, but thruout the entire Province of Quebec.

As a story teller, and especially as a mimic of some of the local characters in and about Thetford, he has no equal in amateur ranks.

From a very dependable source we have received comments about the condition in which some Canadian Fibres reach British and Continental buyers.

One bag of fibre recently delivered, contained several pieces of wood about one half inch thick and from three to six inches long.

Another bag, *sent as a sample,* was found to contain several such pieces of wood. Upon this *sample* bag depended a fair sized contract.

While every manufacturer realizes the frailties of human nature, and can make reasonable allowance for it, the serious loss and damage to machinery and product which follows the introduction of such foreign matter into Asbestos making processes is so great that miners should do everything possible to eliminate the causes responsible.

MARKET CONDITIONS

Raw Material

Reviewing 1921 trade in raw Asbestos, it is clearly evident that production was certainly less than 50% of the total produced in 1920.

Several of the Mines continued producing even after the curtailed demand made its appearance, this action being taken in order to provide work for men and to maintain the efficiency of organization.

Toward the end of 1920 all directly productive work, with very few minor exceptions, had been stopped, the

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Wick and Rope

Asbestos Fibre Spinning Company

North Wales, Penna.

warehouses having become full and no special improvement in demand being noted.

We understand that the same general conditions apply in South Africa and Rhodesia as in Canada, i. e., production has been materially curtailed.

Responsive to the Canadian demand that manufacturing plants be erected and operated in Canada for the consumption of Asbestos, the Johns-Manville Company of Canada announce the opening of a manufacturing plant within the Dominion. This matter of establishing manufacturing plants within the Dominion of Canada has been prominently before the Canadian people for some little time, and while much can be said on both sides of the argument, we do not believe that any very great progress will be made under existing economic conditions.

It is confidently expected that the Quebec Legislature will at an early date remove the objectionable 5% Provincial Royalty Tax imposed on all shipments of raw Asbestos to points outside the Dominion of Canada. The entrance of Rhodesian and South African fibres into the United States markets clearly works a hardship on Canadian producers, when they have to pay a tax of 5% on their product, whereas the Rhodesian and African producers are not required to pay such a tax.

We have not the temerity to predict what will happen in our Asbestos markets during 1922, but from present indications, the basic industries, such as iron and steel, building, automobile, electrical apparatus, etc., show promise of improvement and in direct proportion as these industries become active so will activity in raw Asbestos increase. Iron and steel is undoubtedly the best barometer for Asbestos.

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have been in somewhat better demand during the last three months of 1921. The improvement is not startling, nor is it enough to be really encouraging. The market quotations have been spotty, due to the fact that in some instances liquidation prices were made by weaker concerns who found the need for money forcing them to offer goods at real sacrifices. In fact some prices which have been made during 1921 were well below actual cost of production.

Buyers naturally and logically seize upon such liquidation quotations as representative of market conditions, but the well ordered, properly financed Companies in these Industries have, without exception, refused to jeopardize their corporate existence by selling goods greatly below cost or by adulterating goods (in order to meet competition) to a point where such adulteration would involve danger to life and property.

It seems to us that the very worst possible conditions which could be imagined have been with us during 1921, and we are all justified in expecting improvement.

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EDITORIALS

1922

A very few of our industrial leaders are expecting a general revival of good business.

The great majority of opinion seems to be that a gradual, probably slow, improvement will occur during the present year.

Without exception, our economists and principal executives are agreed that the rate of improvement in business rests largely in the hands of Congress.

Present taxation laws are causing large investors to buy tax free securities, thus taking from industry funds which are sorely needed.

Business men, great and small, seem generally agreed that we should have a sales tax which would relieve the payers of high surtaxes and permit capital to return to industry. Congress has refused to enact a sales tax law and it is reasonably clear that political considerations are chiefly responsible. The politician never was and never will be a wise law maker.

The tariff situation is such that unless adequate protection is promptly afforded American manufacturers we will find ourselves more and more embarrassed by imports of cheaply made foreign goods.

The railroads must be reimbursed for losses made by Governmental Supervision and railroad wages must come down to a point where freight and passenger rates will be less of a burden to business.

Prohibition by law, alcoholic and otherwise, enforced by human beings, is so great a farce that it is nearly time for the pendulum to start swinging in the opposite direction, toward the resumption of personal liberty and the pursuit of individual happiness and success.

Our principal cause for being optimistic as to 1922, really lies in the fact that business in 1921 could not have been much worse, hence we can expect nothing but improvement.

Let us start this promising new year by putting just a little more confidence, a lot more energy and unlimited charity into our business transactions and there's no limit to the distance we can travel toward prosperity in 1922.

The "Hardwood" Case

More than three thousand Trade Organizations thruout the United States, fostered and encouraged by several Federal Departments, now are wondering just where they stand before the law.

On December 19th the United States Supreme Court affirmed the injunction granted by the United States District Court of Tennessee, restraining the Hardwood Manufacturers Association from gathering and disseminating statistics as to production, stocks on hand, sales, quotations and other like information.

The Supreme Court divided, six for and three against, the decision.

Much of the press comment on the decision is predicting that this will mark the beginning of the end of trade association work in America.

That the Court would severely rebuke the Hardwood Producers was expected by nearly everyone familiar with the use to which the statistical information was put by the officers in charge. It was, however, anticipated that the Court would clarify the situation by pointing out, more clearly than the decision does, what could have been done without contravening the law.

Only a few weeks ago, the United States District Court of Illinois, in a case very similar (except as to the use made of the statistics) viz: Linseed Oil, dismissed the case for want of equity. In other words, United States District Court Judge Carpenter decided that the Linseed Oil Producers were entirely within their legal rights, in gathering and publishing to members the vital statistics of their industry.

For more than thirty years the Sherman Law has been on our Federal Statute Books and, even now, after the Hardwood decision, we are a long, long way from an exact knowledge of what the Sherman Law means.

Under this law the American Tobacco and Standard Oil Companies were dissolved and under the same law the United States Steel and United Shoe Machinery Companies were not dissolved, under "restraint of trade" and "monopolistic" proceedings.

The Hardwood decision does not necessarily mean that the gathering and legitimate use of trade statistics and information is, in itself, unlawful. The United States

Department of Commerce has been issuing a Monthly Survey of Business which is largely made up of data gathered and compiled by trade organizations, this fact indicating that a very important branch of the Government considers this sort of information of importance to the Nation.

Public opinion is suspicious of all organizations of business men and the ultimate effect of these trials and decisions may well be the passage of still more drastic laws defining what may and may not be done.

Prohibition of alcohol makes a majority of decent, self-respecting citizens suffer for the abuses of a small minority and so it will probably be in the case of trade bodies.

A statement issued by the Department of Justice on January 4th says the things prohibited by law are; price fixing, limiting of production, and division of territory by agreement.

From this it would not appear that the legitimate tabulation and use of trade statistics would run counter to the law.

The clean, clear cut policy for industry to follow is that of gathering and publishing trade information and statistics to everybody interested,—buyer, seller, government and public.

Unquestionably, every industry should know the facts about production, distribution, stocks, prices and the like and if all such knowledge is made available to the public, no legal entanglements could follow, but every one in and out of the industry would be entirely satisfied and benefited.

The Automobile

We were tempted to make of this issue of "ASBESTOS," an Automobile Number.

Having personally witnessed the wonderful growth of the automotive industry, and, with it and part of it, the tremendous increase in the use of Asbestos in automobile parts, we, naturally, might wax enthusiastic on the subject.

Starting less than twenty five years ago at exactly nothing, today our national trade in automobiles, parts and service is second only to the building industry, and that is some record.

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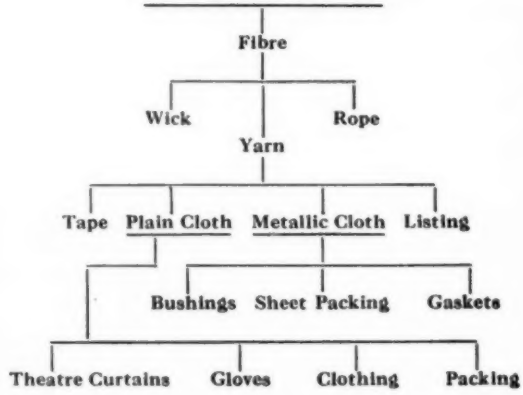

Compressed Asbestos Fibre Sheet Packing

"Quality and Service"

It is natural that the lure of large volume, large gains and great power attracted to the trade many incompetents and a few undesirables. Demand for cars up to the past few months, has made the field quite safe even for the unlearned. This condition no longer obtains, however, and from now on we will see a gradual elimination of the weak and a strengthening of the strong.

Not only will the less capable manufacturers be frozen out, but, we believe, the time is fast approaching when service stations, accessory dealers and ordinary cross roads garages will pass into the hands of highly efficient, properly trained business men.

The public has cheerfully paid the price for the experiments conducted by makers of cars and now is demanding tried and tested cars at fair prices.

So it will be with service, parts and accessories and those men who see and grasp the opportunity for trading on a fair and just basis will lay the groundwork for a lasting and honestly profitable business.

The day of charging $15 for a $2 job is fast passing and when it has gone the whole automobile industry will have profited along with all of its customers.

The Asbestos industry can help the automotive trade in this readjustment period and no Asbestos man should shirk his obligation.

◇

The Tariff by American Valuation

So much comment has been noted thru the press, and so worthy is the American Valuation Plan of assessing Tariffs, that a few words of explanation might serve to elucidate the misconceptions of many readers.

Under this plan ad valorem duties would be assessed upon the wholesale selling price of the same or similar articles in the principal markets of the United States. If the particular goods imported are not manufactured here, then, upon the wholesale selling price at which similar merchandise is sold in the United States. If neither of the above prices can be determined, then upon the wholesale selling price of the goods abroad at the time of export, plus all charges delivered to our ports. If none of the values above can be ascertained, then, upon the cost of production abroad plus duty, transportation charges, ex-

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penses and profits. The responsibility for determining the amount of duty due rests with the appraising officer at port of entry.

The simple phraseology of the foregoing explains the whole proposed system now before Congress so far as basis for assessment of duties is concerned. Now let us look to the merits of the proposed plan.

For a hypothetical case, suppose the American wholesale selling price of an article is $3.00, while the English export price is $2.00, the German export price $1.60, and the Japanese export price $1.20, with a tariff rate of 50%. Under the foreign value method of assessment, the duty on the English article would be $1.00, equalizing the price of the English and American article laid down in the States; the duty on the German article would be 80c; on the Japanese article 60c. Then, the selling prices here in the States would line up: United States $3.00; England $3.00; Germany $2.40 and Japan $1.80, thus allowing a differential of 20% in favor of Germany and 40% to Japan on the tariff alone—which is unfair competiton.

The American Plan would equalize the duties from the above three sources of importations by controlling uniformly the basis of assessment. If according to the American Plan the tariff rate was 50%, the duty on the article described above as selling in our wholesale market at $3.00 would be $1.50 to all foreign nations alike. This is equitable, impartial and fundamentally just.

If a foreign manufacturer can produce an article at a lower production cost than his competitor, that is commendable, but if, because of this, the United States Government should give that manufacturer an additional differential on entering the American markets, due solely to the tariff schedule, that policy, we believe, would be in principle, fundamentally wrong.

Commercial Crime

While criminal offenses are running rampant in the moral world, it is not unnatural for us to consider the crimes being perpetrated in the commercial world.

Like the herds of old, everybody runs to cover when disaster comes, but frequently instead of finding protection, one dashes pellmell into even graver danger. The period of depression has set business interests rushing madly in every direction, supposedly in search of better con-

ditions, but actually into more imminent danger. In the business world the prevalent disposition seems to be to unload on the other fellow. Prices apparently have little consideration. As one company names a low price, his competitor goes him one better until the point of vanishing profits is reached. Nor does the mad orgy stop here, because it has been the experience of not a few companies that the force of competition has caused business to be taken below cost of production.

Herein lies the commercial crime of which many stand guilty and convicted before the business world. A crime has been committed commercially against competitors, government and the public every time business is taken showing no profit.

The government has frequently held it to be an illegal practice for a company to take business below cost of production for the purpose of putting a contemporary out of business. Consequently it is potently the government's policy that business done at a loss is a procedure detrimental to all interests.

What is the answer? How keenly the steel companies have sensed the situation and come thru with a big merger. With equal astuteness the oil companies, small and large, have joined in a big syndicate. The identity of no steel or oil company will change, nor will its organization, nor even its personnel. What is happening is simply the formation of a holding company to function as a sales organization which will avoid to a large extent commercial crime. Most assuredly will they avoid commercial suicide insofar as it is humanly possible, which is more than many companies can anticipate.

In the case of specialized industries such as are the Magnesia and the Asbestos Industries, how plausible is the idea of merger. The days of cutthroat competition have returned. The gong of approaching danger has been sounded by business depression and price liquidation. Competitor attacks competitor's goods, undermines competitive prices, breaks his own market—all to the detriment of the industry. The public is jubilant while it watches industry attack its own, each company wallowing in its own crime which leads only to disaster. The only excuse for the commercial orgy is the "other fellow." The formation of a

holding company thru which all sales would be consummated would be the silver lining beneath the dark clouds. No change of management or control would be necessary. All units would remain intact as component parts of the parent organization.

It is worthy of note that the securities of the steel companies found occasion for a rise of several points upon the merger announcement. Unquestionably Wall Street saw the wisdom of the action as much as did the individual companies.

Imports and Exports of Asbestos

It is interesting to note that importations of Raw Asbestos from Canada during October 1921 amounted to approximately 2100 tons more than those for September. The exact figures are: October, 7,479 tons valued at $241,575, September 5307 tons valued at $182,969.

Besides the material from Canada, but one ton of raw Asbestos was imported during October, that coming from China and valued at $214.

Imports of Manufactured Asbestos products during October, exclusive of Canada amounted to $3,795, divided as follows: England, $3,791; Japan, $4. Approximately $34,000 worth came from Canada.

Exports of Raw Asbestos for October amounted to 20 tons valued at $720, all of it going to England.

Exports of Manufactured Asbestos amounted to $69,305. Of this amount France took $5,028, Denmark $3,650, Germany $645, Italy $3,216, Norway $2,352, Spain $1,010, England $7,502, Mexico $12,691, Cuba $6,334, China $2,080, Australia $2,324, Japan $3,545, and so on.

The October 1920 figure for exports of Manufactured Asbestos was $265,584.

According to the Monthly Summary published by the Department of Commerce, United States Government, the imports of raw Asbestos during the year 1921 up to and including November amounted to 58,485 tons valued at $2,071,077; imports of manufactured Asbestos products for the same period being valued at $348,859.

An Efficient Pipe Covering Should Not be Heavy

Every ounce of weight beyond that really necessary for structural strength is a detriment and is likely to induce sagging.

Some well-known pipe coverings weigh from 18 to 42 pounds per cubic foot. 85% Magnesia Pipe and Boiler Covering weighs approximately 12 pounds per cubic foot, and yet its crushing strength may be conservatively rated at 100 pounds *to the square inch* of standard thickness! A heavy man can stand on a half section of 85% Magnesia Pipe Covering placed flat and unsupported on the floor, without crushing it.

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Contractors and Distributors Page

A hundred and sixty-eight purchasing agents, representing as many firms, refused to buy when approached by salesmen, and later, explained how they might be sold the next time. They enumerated the undesirable qualities in salesmen which antagonize buyers. Grave exception was taken to the following:

Profanity, egotism, loud talking, no knowledge of his line, incorrect advice, misstatements, boasting, interrupting while intensely busy, talking too much, talking to girls in office, old jokes, entering office with cigarette or cigar in mouth, chewing tobacco, talking politics, knocking a competitor's goods, ridiculing line of goods carried, overstatements, condescension in calling upon a small dealer or at a small town, and smutty stories.

On the other hand the same group of buyers commend the following qualities as most likely to win and those which befit the ideal salesman:

Must know his line -

Be able to offer constructive ideas to buyers -

Give honest advice as to quantities it is desirous to buy -

Have a courteous and pleasing personality.

The above facts clearly indicate that the average purchasing agent is a keen analyst of human nature. His mind preys upon the salesman as intently and from as many angles as does the salesman's mind upon the prospective customer. Neither has any advantage of the other. Both are waging a contest on neutral ground.

Evidence is not lacking to show that salesmen cannot be too careful in approaching customers. They can scarcely afford to take a single chance. It may be only a slight personal characteristic or an unintentional break made by the salesman that rubs the buyer's fur the wrong way. However small the offense, it may cost him the order.

Since these findings are the result of experience and deductions made in the great laboratory of salesmanship—right out in the commercial field—they should be of more than passing importance. Out of the several calls made each day, how often does the salesman fail to sell? Scale those prospects whose order failed to come thru, check yourself against the points herein set forth and determine the necessary requisites on which you fell down. Salesmen should take no chances unless they know their prospect well and even then it would seem to be poor sales diplomacy.

What lathering is to shaving so is advertising to selling—*Forbes.*

Notes from Mining Centers

South Australia.

A deposit of crocidolite or blue Asbestos was recently discovered on Section 53, Hundred of Dutton, South Australia. Two shafts 40 feet apart have been sunk to a depth of 26 feet and connected by a drift. The Asbestos is reported to occur in a thin bedded hard rock associated with talcose material derived from the alteration of magnesium marble. The maximum length of fibre is about 2 inches, much of it being short and matted. Fibre from the bottom of the shaft is stronger than that at the surface. The ore body is faulted off below the 26 foot level, and until more is known of the extent and nature of the fault it seems unwise to attempt further mining except along the surface. The deposit does not appear to be extensive.

South Australia is a producer of Asbestos in a small way. The South Australian Mining Review gives the following production figures: 1915, 7 tons valued at £5; 1916, 21 tons valued at £210; and 1920, 5 tons valued at £90.

Western Australia

From the State Mining Engineer at Perth we receive the following report on the Asbestos Industry in that district:

Chrysotile Asbestos of good quality and lengths up to as much as 10 inches has been found in several districts in the northern part of this State, but little has yet been done to develop it. Only two small mills are at work, neither of them well adapted for dressing Asbestos.

The occurrence of the ore is along lines of shearing in the serpentine, resembling ordinary lodes, not in large brecciated masses as in Canada, and underground mining, not open cut, will have to be the usual method of working.

Parcels of first grade picked crudes, 1½" to 3½" in length of fibre, have been bringing £200 to £280 per long ton in London. A local Asbestos cement sheet factory, lately established in Perth, is giving £30 a ton at Fremantle for milled fibre around ½" length, suitable for their purposes.

Blue Asbestos also occurs in this State, but is not yet worked.

Some very good fibre from the Moora district, not very far from Perth, has been found to be the variety known as Anthophyllite.

It is very probable that Asbestos in this State will be of much more importance before long than it is now.

Arizona

It is reported that Geo. England, Bob Anderson and Mac Robinson, who have by far the best Asbestos showing on the Indian Reservation, have their place bonded to Chas. M. Taylor of Tucson. It remains to be seen if anything will come of this transaction.

In general things are pretty quiet in Arizona but with the

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spring considerable activity is looked for, provided there is a market for Asbestos.

Some two foot Asbestos reported from a prospect three miles north of Chrysotile, turned out to be mountain leather.

The Cherry Creek District has a great deal of ore, mill fibre size, with some very good long fibre also. More development may show up a good production of spinning fibre.

Several months ago one of our correspondents in Arizona reported the unique occurrence of Asbestos in the workings of the Superior and Boston Copper Company in the Globe district. This was the only case known where Chrysotile Asbestos occurred in conjunction with high-grade Copper and Silver ores, and the Superintendent of the Superior and Boston Copper Co. went to the Regal Mines in order to familiarize himself with method of production and system of hand cobbing and preparing Crude Asbestos for the market. Shortly thereafter, however, all Copper Mines in the district closed down on account of the general slump in business. It is now reported that the Superior and Boston Copper Company has decided that it will pay them better to confine their operations to their rich metal ores and leave Asbesos alone. This decision has apparently been reached because the Asbestos encountered in their workings is of the harsh or brittle and splintery variety which is not favored for textile purposes.

During the summer and fall of 1920, when there was great mining activity in Arizona, some of the larger Asbestos Mines employing 200 men or more, the smaller operators had difficulty in obtaining miners and other labor and instituted in many cases the so-called "Contract System," which in effect leased a portion of the ground to a small group of individual miners, mostly Mexicans, and paying them a certain amount per pound of Asbestos produced. As supervision of these "leaders," as they are called, has in many cases been slack, some of the properties which might have developed into fairly good mines have been spoiled considerably and will require quite an outlay of money before they can again be worked economically. Whenever there is scarcity of labor in Western mining camps there is also a good deal of drifting of miners from one camp to another and Mexican miners are apt to go for a little "paseo" between their periodic fits of industry. As many of them travel with pack-burros anyhow, the temptation is great to pick up a few bags of Asbestos here and there, and while they cannot sell the Asbestos as such, they work it into such material as they produce from their labors in the leasehold and the smaller operators are sometimes very much pleased to get unexpectedly from their "leasers" a very high grade Asbestos where they least expected to find it.

It also happens frequently that trucks loaded with Asbestos on their way from the mines or loading camps to the railroad, a distance of some forty miles over very rough mountain roads,

LAW!!!

The apple fell on Newton's head.

Galileo noted the pendulum's perfect rythm.

The tub overflowed when Diogenes took his bath.

True then—true now—true always—these things represent *Law*. Don't fool yourself. You can't evade *Law*.

A manufacturer had some hot oil storage tanks. It would cost $8000 to insulate them—unthinkable! Then he made a test and actually measured the steam used in one tank before and after insulating it. The results amazed him. He found the savings would pay for the insulation in 8 months—and give him an extra 150 boiler horse power in his boiler room.

He had thought he couldn't afford to insulate—but he was paying for the insulation every 8 months whether he could afford it or not. He couldn't evade the *Law of Heat Loss*.

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break down and must be temporarily left without a watchman so that spare parts, etc., may be gotten, which fact is also taken advantage of by the marauding and itinerant miners, and when the driver of the truck returns bags of Asbestos are missing.

Those who are sufficiently familiar with the characteristics of the Asbestos fibre coming from the different workings in Arizona claim that they can easily detect in a mixed lot the fibres which come from the various workings, and we are told that several parcels have been offered recently by firms in the United States whose integrity is above suspicion, but who, apparently not knowing the details of the Arizona situation, have not been overly careful in determining who in Arizona they should do business with. It is reported by our correspondent that there are several parcels being offered which show that Asbestos from the Chrysotile Camp and also from the Regal Mine has found its way into the bags of other shippers. Chrysotile Camp has not sold any Asbestos in the domestic market so far as we know, since the H. W. Johns-Manville Co. controlled the mine, and the fact that it is mixed with Asbestos from other workings would clearly indicate that it is gotten by surreptitious methods. The Crude Asbestos from the Regal Mine is still more easily detected when mixed with other Arizona Asbestos, as it has a peculiar lustre and coloring and other distinctive characteristics. A word of warning does not seem to be amiss, therefore, that buyers in the United States should, whenever possible, investigate the origin of the Asbestos they buy as otherwise disagreeable consequences might ensue.

Africa

A. L. Hall, Assistant Director of the Geological Survey of South Africa, gives, in the October 15th issue of the South African Mining Journal, an interesting account of the chrysotile deposits near Kaapsche Hoop in the Barberton District. He says:

"The deposits occur in the serpentines of the Jamestown Series and lie from 12 to 15 miles from Godwan River Station. The fibre line extends from the eastern slopes of the Drakensberg eastward for some three miles and is up to 15 feet thick. The seams are distributed both along the contact between two varieties of serpentine or in a green rock immediately underlying a thin quartzite. The principal development work has so far been done on Joubertsdal No. 99, by the Amianthus Mines Ltd. and in Messrs. Myburgh and Munnik's workings on adjoining Government ground. The most striking feature on Joubertsdal where the fibre line is opened up continuously for 800 yards along the strike, is the association of a very large number of almost strictly parallel seams over a width of from 5 to 15 feet, with occasional seams up to 7 inches thick. The fibre has that peculiar snow-white fleeciness and high tensile strength combined with the delicate olive green tint of fibre lumps, characteristic of superior quality chrysotile. A plant for milling and screening is now in working order, and furnishes seven grades of fibre down to a quarter of an inch, while the proportion

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of spinnable fibre (three-quarters of an inch and over) is uncommonly high."

Mr. Hall goes on further to say that these deposits are in payable quantity and quality, the economic importance of them lying in the large quantities of ribbon rock available, in the high flexibility and general superior quality of the fibre, and in the high proportion of spinnable length. Development has not proceeded far enough to give any definite indications as to persistence of fibre in depth, but the field relationships favor the view that the fibre formation does not depend upon changes within the belt of weathering.

Africa (Rhodesia)

The official returns of the Rhodesian Chambers of Mines give the following figures of production of Rhodesian Asbestos, for the months of August and September 1921:

	Aug.		Sept..	
Bulawayo District	Tons	£	Tons	£
Birthday (Willoughby's Con. Co. Ltd.)	296	10,024		
Nil Desperandum (African Asb. Mng. Ltd.)	162	4,063	181	4,520
Pangani (J. S. Hancock)	14	320	12	260
Shabanie (Rho. & Gen. Asb. Corp. Ltd.)	258	6,459	243	6,073
Slip A (Slip Syn.)	30	1,640		
Lomagundi District				
Ethel (Union & R. Trust Ltd.)	90	1,125	30	375
Victoria District				
Balmain (Afr. Asb. Mng. Co. Ltd.)	55	1,375		
Eva (V. S. Welsford)	5	125		
Gath (Rho. & Gen. Asb. Corp. Ltd.)	160	4,001	70	1,755
King Asbestos (R.) Ltd.	120	1,934	52	782
Knights Deep (V. S. Welsford)	5	125		
Sapientia (V. S. Welsford)	10	250		
Shashi (J. Sadler)	5	250		
	1210	31,691	588	13,765

Total production for the nine months to September 30, 1921, was 17,555 tons compared with 12,578 tons in 1920.

The total output of Asbestos, officially returned by this Chamber to September 30, 1921, from the commencement of operations, is 74,376 tons, of a value of £2,143,597.

Africa (Union of South Africa)

The sales and shipments of Asbestos for September and October 1921 officially returned by the Department of Mines & Industries for the Union of South Africa are:

	Sept.		Oct.	
	Tons	£	Tons	£
Transvaal	86	1,070	11	600
Cape Colony	290	6,299	255	5,201
	376	7,369	266	5,801

The corresponding figure in September 1920 was £4,958; October 1920 £7,161.

The value of the output by months for 1921 is as follows:

January	£ 9,452	June	£8,516
February	10,717	July	7,694
March	10,561	August	7,869
April	13,338	September	7,369
May	7,136	October	5,801

Export values for the eight months ending September are £92,964 in advance of those for the similar period last year.

We quote from the Bulawayo Chronicle of November 12, 1921, the following:

Considerable interest is being shown in the location of a very large strike of Asbestos in this (Mashaba) district. Mr. G. Epstein, of Shabani, who spent a considerable amount of time in examination of the field, reports that he has defined a practically unbroken strike of six miles, commencing in the Olga claims and continuing on to and thru the Sapientia extensions. At the Olga work has been done to a depth of 35 feet and at that level a cross cut has proved the width to be 80 feet, with several very fine two inch seams exposed. At the Sapientia work has been done to a depth of 70 feet, at which depth water was struck, but the fine Asbestos is still going down; a cross cut of some 150 feet in this property shows over 50 seams of marketable fibre, of which a very large proportion is half inch and over. The fibre is of exceptionally fine quality.

The section of the strike which has created the present excitement is the central portion which is held by Mr. E. Francis, of King's Mine fame. This section has shown extraordinary fibre, several three-inch seams close to the surface being visible, while a great number of one-inch seams are in evidence and the fibre is of the same high quality which characterizes the whole strike. Mr. Francis was the original pegger of King's and he confidently expects to repeat his luck.

The whole strike has been pegged by various interests and work is proceeding apace. Prospectors are still busy in the locality, and further discoveries are expected. Some of the fibre recovered has been put thru the mill at the Eva Mine, and experts declare the product to be a very superior fibre.

Manufacturers of Asbestos Textiles, Packings and Specialties who desire a local agent to represent them on Pacific Coast may be placed in communication with a well recommended San Francisco office by addressing 1F-2A "ASBESTOS."

POSITION DESIRED—Man experienced in organization, estimating, selling and application of Asbestos materials. Sound health and above all not afraid to work. Has had charge of office and large territory for large Asbestos concern. Is desirous of making connection with concern wishing to open source of supply for Northern Ohio for Covering and Asbestos Textiles. Address 1S-3 "ASBESTOS."

Canadian Crude and Fibres Asbestos	South African and Rhodesian Blue and White Asbestos	Russian Asbestos as soon as Railway Traffic will be Opened

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FOR THE MANUFACTURE OF

Asbestos Millboard
Asbestos Paper
High Temperature Cements
Pipe Coverings
Asbestos Shingles and Lumber
Insulating Cements
Fibrous Paints
Filtration Packings
Roofing Cements

THE QUEBEC ASBESTOS CORPORATION

Office and Mines

East Broughton, Province of Quebec
Canada

COMPARISON OF ANALYSES VARIOUS FIBRES

	Canadian	Shabanie C. & G.	Arizona	Blue		Amosite	
				No. 1	No. 2	No. 1	No. 2
Silica	40.49	40.96	41.71	51.1	52.11	50.24	49.48
Alumina	1.27	1.70	2.80		1.01		.68
Ferric oxide	2.53	2.44	.50		20.62	7.80	8.16
Ferrous oxide				35.8	16.75	32.00	30.09
Magnesia	41.41	38.73	41.99	2.3	1.77	3.96	6.77
Lime		nil	.09				.88
Sodium oxide				6.9	6.16	2.12	.20
Combined water	14.06	13.37	12.81	3.9	1.58	3.00	2.74
Moisture		2.70					
	99.76	99.90	99.90	100.	100.	99.12	99.

NEWS OF GENERAL INTEREST

The Arizona Mining Journal, issued January 1st, presents a digest of the copper market which indicates that the amount of copper now available for domestic consumption from all sources is but three hundred million pounds. It is stated that during January definite plans for resumption of operations will be announced by several of the larger producers and it is predicted that by the latter part of March every copper producer in the United States will have resumed operations. This is indeed very encouraging as a sign of the business times.

Raw Material, issued December 1921, pages 449, 450 and 451, describes and illustrates a large variety of articles of everyday use made from Micarta, a composition exclusively used by the Westinghouse Electric Manufacturing Company of Pittsburg.

The article has some interest for Asbestos manufacturers and salesmen inasmuch as the materials are generally used in electrical insulation.

According to Dodge Reports, the total of contracts awarded in November was 45% ahead of November 1920. It was only 14% under the total for October, 1921, whereas November is normally 24% less than October.

Except Boston and Chicago, all districts showed marked increases over the corresponding month last year, the decreases in these two districts were very slight, 1% and 3% respectively.

Residential building continues in the lead, even showing a slight increase over October. That construction activity is holding up more than usually well with the approach of the winter season, indicates an increased volume of activity in 1922.

Under the title "Bare Pipe Heat Loss Cost" in The Paper Industry for December appears a very logical and understandable paper on this important subject.

The tables and graphs are especially well prepared and everyone interested in insulations should digest this article.

The figures of fire losses for November were $23,641,160, for October $25,505,800, and for September $31,176,100. The losses for November 1920, were $24,169,000 and for the same month of 1919, $23,450,800. The total for the eleven months of 1921 reaches the enormous aggregate of $309,141,610, over nineteen million dollars in excess of 1920, and fully sixty-seven million over the losses of 1919.

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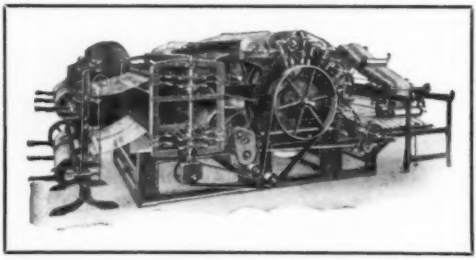

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Circulars and further particulars on request.

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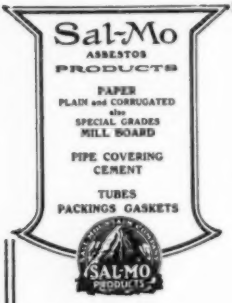
Philadelphia **Penna.**

The Thirteen Most Foolish Things a Driver Does

1. Arguing with the Cop.
2. Trying to make the Cop believe you are Eddie Rickenbacker or Secretary Hughes.
3. Trying for Boulevard speed records with new car.
4. Trying for Boulevard speed records with old car.
5. Driving under influence of Volstead Antidote.
6. Trying to beat the other fellow to the crossing.
7. Trying to take right of way from truck.
8. **Neglecting brakes.**
9. Night driving with single headlight.
10. Stopping or turning without signal.
11. Blowing loud horn two feet from pedestrian.
12. Leaving car unattended without thief-proof appliances.
13. Arguing with the Cop.

—From Collier's.



Dissipated Heat is lost Capital

It cannot be recovered

Steam Pipes and Hot Air Pipes If Properly Protected

will carry a greater amount of heat to the place where it is needed. The home owner does not want to pay for heating his basement to a temperature over 60 degrees F., but unless the pipes are covered the heat that he wants in the living room will be in the basement.

This is the peak of the heating season. Right now when the home-owner is shoveling $16.00 coal, he can easily be sold on covering his pipes because it saves dollars and cents.

Tell him about it.

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Are Efficient Heat Insulation Materials

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Scranton, Pa.

BOSTON, MASS.
263 State St.

NEWS OF THE INDUSTRY

The Clyde Line, in conjunction with the Eastern Steamship Company of Boston, contemplates the construction of two passenger ships at a cost of approximately two millions of dollars.

The Jersey City, N. J., Journal, issue of December 12, reports an issue of bonds in the amount of $250,000 by the National Asbestos Manufacturing Company. The bonds are secured by recorded mortgage covering real and personal property, given by the National Asbestos Manufacturing Company to the Mercantile Trust Company of 115 Broadway, New York City. Bonds are to be dated November 1st, 1921, and will be issued in sums of $100, $500 and $1,000, bearing interest at 8%, payable on May and November 1st in each year and are payable at the rate of $25,000 on November 1st in each year beginning November 1, 1922. The bonds are redeemable on any interest day at $110. Mortgage was signed by C. P. Burkhardt, Vice-president, and G. C. Hall, Secretary, of the National Asbestos Manufacturing Company, and covers all buildings, machinery, fixtures, and a 99 year lease given by the City of Jersey City to the Company on a plot of ground 400 by 250 feet.

At a meeting of the directors of the Black Lake Asbestos & Chrome Company, Ltd., held early in December, the resignations of W. G. Ross and J. W. Cook were submitted and accepted, and A. E. Francis, of the shipping firm of McLean, Kennedy, Ltd., and Edward Ansen, of New York, were elected directors in their stead.

This means that Jacob A. Jacobs has now obtained complete control of the Black Lake Asbestos & Chrome Company, Ltd., as the newly elected directors belong to the Jacobs group. —Financial America.

An attractive little catalog bound in grey cover, has just been issued by Chas. S. Wood & Company of Newark, N. J., distributors of Asbestos and Magnesia Products and Contractors for Heat Insulation. The catalog gives terse but comprehensive information on the various materials handled by the Company.

In manufacturing the well known Victor Brand of Gaskets, the Victor Manufacturing and Gasket Company of Chicago uses a very large quantity of Asbestos.

Sixty-five carloads of Asbestos Millboard were consumed in 1920 and about forty five cars will have been used in 1921.

About seven and one half million pounds of copper were used, and it is clearly evident from these figures that the Vic-

tor Company is almost if not quite the largest user of Asbestos Sheets in this country.

Major Gordon D. Oulster, known to many of our readers, and recently covering the United States in the interest of Consolidated Asbestos, Limited, was called to his home in Toronto on December 19th, due to the sudden death of his mother. We sincerely sympathize with the Major in his bereavement.

We are advised that the Maple Leaf Asbestos Corporation has operated continuously since first starting, and is at present running full time.

A brief was presented to the United States Senate Finance Committee in recent hearings on the Fordney Tariff Bill by H. P. Barnes, Jr., representing the American Manufacturers of Asbestos materials.

W. E. Steelman, representing the American Asbestos Dealers Association, argued against the Fordney bill, claiming that its proposed rates are entirely too high.

Senator Ashhurst of Arizona presented a brief on behalf of Arizona Asbestos Miners, asking a duty of 20c per pound on raw Asbestos. The Fordney bill permits Asbestos to remain on the free list as it has for so many years been classified.

"ASBESTOS" is desirous of obtaining the correct address of R. S. Smith, of Cleveland, Ohio. Mr. Smith wrote us on December 9th, asking for certain information and giving his address as 4317 Brooklyn Avenue, Cleveland, but letters sent to that address have been returned by the postoffice authorities. Anyone who knows the correct address will be doing both Mr. Smith and "ASBESTOS" a distinct favor by advising us.

Lefax data sheet No. 11-616 contains an abstract taken from the article by W. A. RuKeyser, B. Sc., E. M., which was published in the May, June and July 1921 numbers of "ASBESTOS."

On January 12th, a meeting of the Consolidated Classification Committee was held in Room 2118, Transportation Building, Chicago, Ill., to consider Docket 1663, on the proposed reduction in rates on Magnesia Pipe and Boiler Coverings, in blocks and forms, from $2.25 per hundred pounds to $1.62½ per hundred pounds, in carload lots. Result of this meeting is not known at time of going to press.

We quote from the Canadian Mining Journal of recent issue:

An examination of Asbestos properties at Rahn Lake is being made and there are good prospects of a deal being put thru which would assure aggressive operation of the property by mining men who are already engaged in the Asbestos mining industry. The deposits lying at Rahn Lake in the vicinity of Mt. Sinclair, are said to be extremely promising and their suc-

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cessful operation is believed to lie in a solution of transportation difficulties.

It is our pleasure this month to extend birthday greetings to Mr. George D. Crabbs, President of the Philip Carey Mfg. Company, and to Mr. C. B. Jenkins, Jr., Vice President and Sales Manager of the General Asbestos & Rubber Company.

Mr. Crabbs' birthday occurs on January 22nd; Mr. Jenkins' on January 28th.

We wish both gentlemen many happy returns.

The Cape Asbestos Company has been compelled to considerably reduce the output of blue crude from its mines in South Africa, owing to the present depreciation in the Industry. It is hoped, however, that with the improving outlook generally, full mining operations will be resumed at an early date.

The only manufacturing firm in South Africa, of which we are aware, is The Asbestocement Manufacturing Company Limited of Wentworth Works, near Durban, Natal, which is a branch of the Iron Concrete and Asbestos Manufacturing Company of that town, manufacturers of Hercules Asbestoboard, similar to the usual Asbestos and cement products familiar to our readers.

The Eastern Asbestos Company, 72 South Water street, Providence, R. I., has issued to its clientele a very attractive desk calendar. Since the calendar is small it will not take up much room on the busy man's desk and for that reason will doubtless be found useful.

Incidentally, the Eastern Asbestos Company reports having a very satisfactory volume of business during 1921 and enters the New Year convinced that 1922 will be an improvement over 1921.

In a recent issue we indicated that Abram E. Minium, well known in the Arizona Asbestos field, had been arrested in Globe on a Federal charge. Later advices indicate that the Governor of Illinois filed with the Governor of Arizona requisition papers for the return of Mr. Minium to Cook County, it being stated that Mr. Minium had been indicted by the Grand Jury on a charge of operating a confidence game, in connection with the American Fireproof and Mining Company and two other Asbestos mining organizations.

Mr. Minium was arrested in Globe on October 14th, but on October 26th Governor Thomas E. Campbell of Arizona received word that Mr. Minium would not be required in Chicago under the indictment.

In fairness to Mr. Minium this statement is gladly given publicity by "ASBESTOS."

The advertising of the D. & W. Fuse Works, of Deltabeston and Colorbeston Asbestos insulated wire, is attracting much attention in the electrical trade press.

ASBESTOS

A most useful desk calendar and memorandum pad is being sent by the Norristown Magnesia & Asbestos Company to its clientele. This is particularly handy as the memo pad is secured to the calendar by a clip, thus making it possible to readily renew the pad when necessary.

The Asbestos Materials Corporation (in which corporation the Greenblatt brothers are interested) are busy installing machinery and equipment in their newly acquired plant at Millington, N. J., where they expect to make a complete line of textiles and packings. Their New York Office has been moved from 583 Broadway to 1769 Woolworth Bldg., but the main executive offices will be located at Millington and all correspondence should be addressed to them at Millington.

Attractive calendars are being issued by the American Asbestos Company, Norristown, the Federal Asbestos Company of Milwaukee, and the Asbestos and Mineral Corporation, New York City.

On January 11th and 12th, the Asbestos Shingle, Slate & Sheathing Company of Ambler, Pa., will hold a meeting of the managers and salesmen from its Chicago, Cincinnati, Minneapolis, Detroit and Milwaukee Branches.

A meeting of the managers and salesmen from its Pittsburg, Buffalo and Philadelphia branches is scheduled for February 1st and 2nd.

F. G. Chadbourne of London has just returned from a trip to the United States, during which he has been able to meet many of his old friends in the Asbestos Industry.

It is a pleasure to report that the mine troubles at Thetford have been amicably settled. At the meeting held on December 7th of miners, mine managers and the Thetford City Council, the mine managers undertook to do their utmost to provide work for the unemployed, committees were appointed at each mine to report cases of general distress, and the miners agreed to waive most of their demands.

The Telendurom Company was incorporated on January 3rd, for the manufacture of high heat and electrical insulation materials, shellac composition, etc. Their plant at Ambler, Pa., is already erected and equipped, and is now running to full capacity. Officers of the new Company are: President, Dr. Richard V. Mattison; Vice-President, Royal Mattison; Secretary, R. E. Frey; Treasurer, U. G. Funk; Assistant Treasurer, H. P. Barnes, Sr.

In the December number of the Journal of American Society of Heating & Ventilating Engineers, page 859, appears an ordinance

for construction of chimneys recommended by the National Board of Fire Underwriters Committee on Construction of Buildings. Complete detail, drawings and instructions appear, and on page 868 the use of Asbestos Board and of incombustible filling in connection with the erection of the chimney flue is illustrated and described.

Full information and copies of the specification may be obtained by addressing Ira H. Woolson, Consulting Engineer, National Board of Fire Underwriters, 76 William Street, New York City.

It would be a splendid plan if every one interested in Asbestos would secure copies of this specification and make personal effort to have it adopted in the cities and towns in his immediate vicinity.

The Blue Asbestos Producers Association of South Africa, met with the Minister of Mines & Industries for South Africa on September 13th, at Kuraman, for the purpose of obtaining Government support in the development of the properties and in the output and distribution of Blue Asbestos. Financial assistance from the Government evidently was considered impossible by the Minister, but assistance was conditionally promised if factories could be established in the Union for the production of Asbestos goods. The question of railway rates and railway facilities was also discussed.

Numbering of Yarns

The continental (European) method employed in the numbering of Asbestos Yarns differs materially from that employed in the United States.

In the first place the European practice is to measure the roving (unspun material as it comes from the cards) rather than the finished yarn.

The continental system is based upon 100 meters of roving to the kilo, this being regarded as one number or one cut. An American 10 cut Yarn, therefore, is a continental No. 20, or 2000 meters to the kilo, an 8 cut is their No. 16 and a 15 cut is their No. 30. Since by the continental system the roving is measured, and in the United States the twisted yarn is measured, there is a difference in the measurement which is estimated as one-seventh.

In other words, if a roving measures 2000 meters to the kilo, the average twisted yarn made from it would measure about 1730 yards to the kilo and such yarn would still be called No. 20, even if the twists run from 4 to 10 to the inch.

QUALITY

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United States Asbestos Company

General Office: Lancaster, Pa.

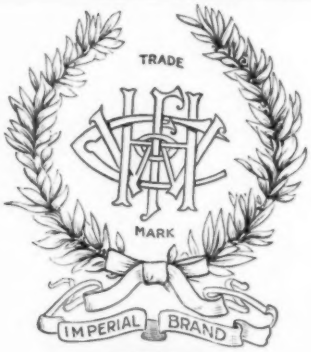
Mills at Manheim, Pa.

Manufacturers of asbestos yarns and fabrics, also packings and friction facings.

Sold exclusively to manufacturers of rubber goods, packings, and brake linings, and to distributors of asbestos materials on a quantity basis.

Branches

New York **Boston** **Chicago**



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Being offered lower prices on Canadian Asbestos we are glad to pass these savings along to our valued customers. Your inquiries will secure very attractive prices on our finished goods.